



BROOKHAVEN BULLETIN

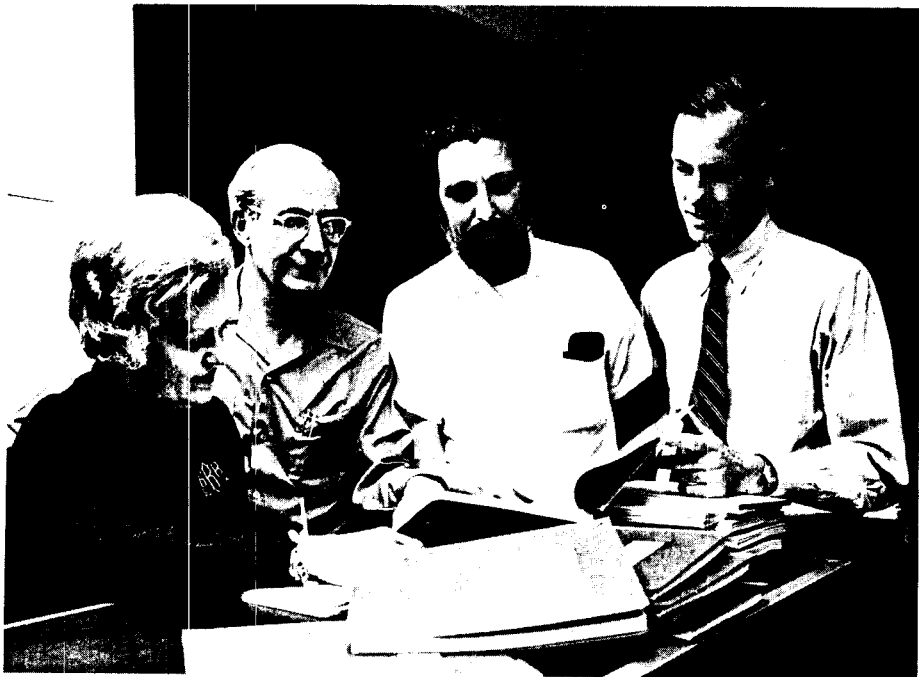
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Volume 25 - Number 40

October 7, 1971

Conference Desk



Pre-registration activities for the conference on Energy, Environment and Planning - The Long Island Sound Region by Gwen Bergin, Warren Winsche, Murray Goldberg and Phil Palmedo (left to right), all of the Department of Applied Science, include checking the papers that had been prepared by the speakers. The conference opened on Tuesday at 1 p.m. and concludes today at 1 p.m. in Berkner Hall.

Conference On Energy, Environment And Planning At BNL Concludes Today

On Tuesday at 1:00 p.m., the first conference on Energy, Environment and Planning - The Long Island Sound Region held at BNL opened in Berkner Hall with a message of welcome from Deputy Director George Vineyard. He was followed by Assistant Director R. Christian Anderson, who chaired the first session, during which the problems were put in the national context by J. Frederick Weinhold of the Office of Science and Technology, and in the regional context by Boris Pushkarev of the Regional Plan Association.

Pushkarev pointed out that Long Island ranks roughly seventieth in area among the world's islands, somewhere between Trinidad and Guadalcanal, and in population it ranks tenth, between Cuba and Madagascar. Long Island's main reason for prominence is its proximity to another island, namely Manhattan, on its western side. Of Long Island's 7.1 million inhabitants, two thirds live in New York City, in Brooklyn and Queens. He pointed out that, "What is remarkable, however, is that this offshore island on a terminal moraine has *ten times* the average population density of the adjacent mainland. The environmental impacts of energy conversion - such as they are - are concentrated here on a small and isolated piece of land . . . Thus, Long Island, while not a self-contained Region by any means, is not a bad place to study the interactions between people, energy and the environment."

Paul Shore, Regional Engineer with the Federal Power Commission, opened session two with a summary of power in the Long Island Sound Region. This session was chaired by Vance Sailor. Shore stated, "There is no more timely or difficult problem confronting our nation today than that encompassed in the 'Energy, Environment and Planning' theme . . . One of the major problems of the energy crisis is our inability - or perhaps sometimes unwillingness - as individuals, to see our neighbors' point of view. We have too often, particularly in the recent past, engaged in confrontation rather than dialogue. The result has been inaction that, in the long run, serves no one . . . Most of us here will agree, I suspect that power is such an essential part of our economy and our way of life that, even if nonessential uses are eliminated, power consumption will continue to grow."

The next speaker, Joel Darmstadter, representing Resources for the Future, reviewed the Flexibility of Energy Consumption. He pointed out that while energy consumption had been growing, there was an accelerated rate of growth between 1965

and 1970, and that 92 percent of this acceleration was accounted for by electricity conversion losses, transportation, and non-energy uses. He stated that, "The formulation of national energy policies which must now begin to cope aggressively with environmental impacts almost surely will have to start dealing with specific regional effects . . . Although one can cite certain instances of energy policy with a decided regional character (e.g., the provision of low-cost TVA power or the unrestricted importation of residual fuel oil into the East Coast), questions with a distinct regional stamp are only now being raised in large number. And one of the first things we run into is the realization that there is an acute deficiency of information on the subject, at least of information that deals comprehensively and in an across-the-board fashion with the varied regional sources and uses of energy. Long range planning for energy use in the Long Island Sound area must somehow grapple with this informational void in order to explore alternative paths of energy consumption growth,"

(Continued on page 2)

All Employees and Spouses Are Welcome to an

OPEN HOUSE

2 p.m. FRIDAY OCTOBER 15

to celebrate the 25th Anniversary of the founding of AUI and the beginning of Brookhaven Laboratory

- ☆ -

2:30 Talk by Dr. Goldhaber (Outdoors near Berkner Hall)

- ☆ -

3 to 5 p.m. — continuous showing of prizewinning film "Brookhaven Spectrum" in Berkner Hall

- ☆ -

3 and 4 p.m. — Lantern Slide Show featuring events in Lab history In Theatre

- ☆ -

See What's New on Site

- ☆ -

Free Beer and Snacks

George Reedy Is Next Pegram Lecturer At BNL

George Reedy, whose more than thirty years of government observations and experience began as Washington Correspondent for United Press and culminated as Press Secretary and Special Assistant to President Lyndon B. Johnson, will be the speaker when the twelfth Pegram Lecture series takes place at Brookhaven on November 1st, 4th and 8th. Reedy is author of the book, "Who Will Do The Fighting For Us?", and more recently, "The Twilight of the Presidency."

In a communication with Dr. Knud D. Knudsen of the Pegram Lecture Committee, Reedy indicated that he intends to cover the problem of assuring responsive leadership in a mass society. This is essentially an extension of his thinking on the Presidency as it relates to the questions of human communication within an impersonalized social structure and the spreading loss of confidence in our fundamental institutions.

George Reedy served as the first White House Press Secretary for Lyndon Johnson in 1964-65, following two years as Special Assistant to the Vice-President and eleven years as an assistant to then Senate Democratic Leader Lyndon B. Johnson. Following an operation, he resigned his post and returned to the President's staff as a special writer in the final months of Johnson's administration.

Among the several important study Commissions on which Reedy served during the Johnson Administration was the Burke Marshall Commission on Selective Service. His book "Who Will Do The Fighting For Us?" is based in part upon the findings of that commission and, in part, upon his own philosophic interpretation of the true function and proper composition of military forces for a democracy in an electronic era. The book has been widely hailed as a provocative arguable thesis.

Happy Birthday To AUI/BNL!

We are going to have a birthday party next week! Not an ordinary birthday party, but a 25th Anniversary Party - a big celebration that will extend over a 3-day period.

Kicking off the big celebration will be the annual meeting of the Board of Trustees of AUI, on Wednesday, October 13, commemorating both the formation of the Initiatory University Group on March 23, 1946, and the first meeting of the Board of Trustees which took place on July 30, 1946.

Later that evening there will be a 25th Anniversary Dinner which members of the senior scientific staff and a few "early timers" will attend as invited guests of the corporation.

The major event will be the Anniversary Symposium in Berkner Hall on Thursday, October 14. Starting at 10:30 a.m. with a welcome by AUI President Gerald F. Tape, the symposium will look forward to the future with a presentation of "Prospects in Nuclear and High Energy Astrophysics," by William A. Fowler, and "New Opportunities and New Commitments in Biomedical Research," by Francis O. Schmitt.

Arrangements have been made to present closed-circuit television projection in the Theatre for those who cannot be accommodated in Berkner Hall with its limited capacity.

Dr. Glenn T. Seaborg, recently retired as Chairman of the AEC, will be the afternoon speaker. The provocative title of his talk is "Brookhaven: An Adventure in Scientific Research."

The subject matter of Dr. Seaborg's speech is expected to be of intense interest to the entire Laboratory community. The talk will start at 1:45 p.m. in Berkner Hall. Overflow will be accommodated in the Theatre.

The last event of the day on October 14th will be a tour of the research facilities for invited guests. Buses will circulate and there will be guides to take people on personalized tours of parts of the Lab.

The really big day for the AUI-BNL community will be on Friday, October 15. This is the day for all employees and their spouses to get around and see what is new and what normally cannot be seen because of the pressures of work. It is also a day to have fun and to enjoy. Some of the events of the day are outlined in the special box on this page. There will be more details in next week's Brookhaven Bulletin.

Come rain, or come shine, the Friday Open House will continue just like any other birthday party.

It has been officially decreed that Associated Universities, Inc. and Brookhaven National Laboratory both reach an age of 25 years next week. Actually, AUI was granted its charter from the State of New York on July 18, 1946 and the Camp Upton site, which is now BNL, was transferred to the Atomic Energy Commission on March 22, 1947.

Rifle-Pistol Club Meeting

The BNL Rifle-Pistol Club will meet at the Recreation Building on Wednesday, October 13, at 5:15 p.m.

Energy Conference (Continued)

their associated environmental effects and the policy options that may be available to guide development along desired lines."

Darmstadter gave detailed breakdowns on the amount of energy used by various sectors of our economy, such as electrical power, transportation, household use, etc., including their historical place and relevance to our gross national product values, their growth rates, and the problems that were and must be faced in the search for solutions.

The conference banquet was held on Tuesday evening in the Berkner Hall Cafeteria, and the speaker was John S. Toll, President of the State University at Stony Brook.

Sessions were resumed on Wednesday under the chairmanship of Clarke Williams, J.B.H. Kuper, and Leland Haworth. The general topics covered were The Ecological Effects of Energy by George M. Woodwell; the Meteorological Aspects by Lawrence E. Niemeyer; the Aquatic Biology Aspects by Gordon Riley; the Hydrological Aspects by David F. Paskausky; the Structure of Planning Activities by Howard Quinn; Energy Planning by Edward C. Duffy; Planning Options by Lee E. Koppelman; Short-Term Options in Power Generation and Transmission by Seymour Baron.

The conference will end today at noon. This morning's sessions are being chaired by Philip F. Palmedo and Warren E. Winsche. Leading off today is a panel session, the utilities being represented by Sherman R. Knapp; the planning community by R. Frank Gregg; the legal community by David Sive; the technical community by David J. Rose; the public by Addison S. Cate; and the news media by Roy Rowan. Following the panel, the conference will close with a summary, conclusions and recommendations session.

The conference was sponsored by BNL, Department of Applied Science, in cooperation with the American Nuclear Society - New York Metropolitan Section; the New England River Basins Commission; the Nassau-Suffolk Regional Planning Board; the Marine Science Research Center - State University at Stony Brook; the Long Island Lighting Company; and the Consolidated Edison Company of New York. The program committee was headed by Warren Winsche, Philip Palmedo and Murray Goldberg, all of the Department of Applied Science.

Theatre Group Tryouts

The BERA Theatre Group is starting work on a production of "Scenes from American Life," by R.A. Gurney, Jr. This play, which received outstanding reviews when it was first performed last year at Lincoln Center, consists of a large number of independent sketches, funny and touching at the same time. The many parts are fairly equally divided between five men and five women. The play will be directed by Ron Peierls.

Tryouts will be held on Thursday, October 7, Monday, October 11, and Tuesday, October 12, all at 8:00 p.m. in the Theater.

A copy of the script is available for inspection in the Recreation Office. Anyone who wishes to try out but cannot make these dates, or who wishes further information, should contact Ron Peierls on Extension 7652. Anyone interested in working backstage should also come to the tryouts or call the Director.

September Retiree



Raymond H. Rheume, an Electrical Engineer in the Accelerator Department who had been employed at Brookhaven since September 15, 1953, retired on September 30.

Here and There

Claire Lambert

Harold H. Smith (Biology) recently presented a paper on "Radiation probes of maize meristems" at the conference on "The Dynamics of Meristem Cell Populations" held at the University of Rochester Medical Center, New York.

A.W. Castleman, Jr. and **I.N. Tang** (both DAS) are attending the Twenty-Fourth Annual Gaseous Electronics Conference. The meeting, which is a topical conference of the American Physical Society, is being held at the University of Florida, Gainesville, on October 5-8. **Dr. Castleman** will be presenting their paper entitled "Molecular Clustering About Gaseous Metal Ions," and will be serving on the panel devoted to the subject of clustering reactions.

Andreas Kappas, **Harold H. Smith** and **Harold J. Price** (all Biology) recently attended a meeting of the Genetics Society of America in Rochester, New York. **H.J. Price** presented a paper entitled "DNA contents per cell and per chromosome in procaryotic and eucaryotic organisms: evolutionary considerations."

Orrin Dwyer (DAS) attended, and served as Technical Chairman for, the 1971 International Heat Transfer Conference, which was held in Trogir, Yugoslavia, September 5-11.

Selected Reading

Science 173, September 24, 1971

The scientific advisory system: Some observations. M.L. Perl. 1211-15

Administration talent search: Alternatives to the buddy system. N. Wade. 1216-18

Oceans 4, September-October 1971

Three days at the bottom of the world. R.C. Murphy. 35-9

Australia's great barrier reef. B. Cropp. 40-9

The mystery of the great white shark. P.S. Miles. 50-9

Nuclear power, environmental research and public understanding. Remarks by James T. Ramey, Commissioner, U.S. Atomic Energy Commission at American Nuclear Society Topical Meeting Nuclear Methods in Environmental Research. Columbia, Missouri, August 23, 1971. U.S. Atomic Energy Commission Press Release No. S-17-71, August 23, 1971.

New Techniques With Radionuclides

The ability to visualize internal organs from outside the body has long been the dream of medical practitioners. One of the methods used to do this utilizes short-lived radioisotopes whose radiation is picked up by an external scanner which then draws a picture of the organ being examined. A healthy organ will show even distribution of the radioisotope throughout, while an unhealthy one will show either more or less radioactivity in the diseased area depending on the process by which the radioisotope concentrates in the organ.

Because of the sensitivity of this method, it is possible to detect very subtle changes in some organs. The use of short-lived radioisotopes, with half-lives measured in minutes or even seconds, also permits the diagnostic information to be obtained quickly and without harm to the patient.

Although progress in the radio-pharmaceutical field has been steady over the years, the problem of getting the right radioisotopic compound vis a vis the organ to be examined has somewhat limited their use to larger hospitals. Two steps that could greatly extend the use of radiopharmaceuticals to many smaller hospitals were recently reported by researchers from BNL before the Society for Nuclear Medicine.

Fluorine-18

One report, given by Dr. Harold Atkins and co-authored by Drs. Wolfgang Hauser, San San Liu and Johannes F. Klopfer of the Medical Research Center and Drs. Alfred P. Wolf, Robert M. Hoyte and David R. Christman of the Chemistry Department, detailed work to date on the use of radioactive fluorine as a label for amino acids in order to externally visualize the pancreas. The pancreas, one of the "hidden" areas of the body for X-ray examination, is also the site of chronic inflammation and of tumors. A simple method of visualizing the pancreas by other than radioisotopic means does not exist. Because of the close proximity of the liver (which also concentrates many radiopharmaceuticals), it has always been difficult to distinguish the pancreas apart from the liver. It was decided to use tryptophan labeled with fluorine-18 (half-life of 110 minutes) for external visualization of the pancreas. The results were very favorable in animals and will be extended to man. Another possible use for this compound is in the localization of carcinoid tumors (usually found in the small intestine).

Instant Technetium-99m

Technetium-99m (half-life of 6 hours) is known as the workhorse of radionuclides. It can be used to externally visualize such

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CARL R. THIEN, *Editor*

CLAIRE LAMBERTI, *Editorial Assistant*

40 Brookhaven Ave. Upton, N.Y. 11973
Telephone 516 924-6262 Ext. 7238

NORBERT J. DERNBACH
Public Relations Officer

diverse organs as the stomach, the salivary glands, the thyroid, the kidneys, the spleen, the liver, the lymph nodes, the lungs, and the blood circulatory system and bone marrow. To do most of these, however, it was necessary to combine the technetium-99m with a selected pharmaceutical that would "home-in" on the proper organ.

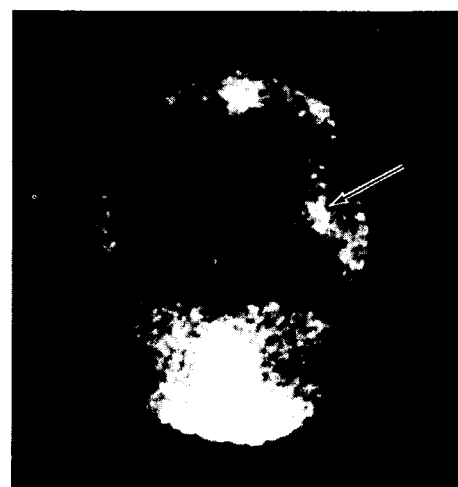
Because of the short half-life of technetium-99m, it is difficult to "pre-mix" it with the proper chemical compounds. To help overcome this, DAS scientists developed early in the program a "generator" containing the parent molybdenum-99, which decays to technetium-99m. These generators, which made technetium-99m the "workhorse" and probably the most important nuclide in nuclear medicine today, are now available commercially from radiopharmaceutical suppliers. They are located in the hospital and are "milked" periodically to get the technetium-99m, and then prepared with the proper compound for application.

Previous methods for preparing technetium radiopharmaceuticals developed at Brookhaven and elsewhere required a relatively complicated, multi-step procedure. Now, however, the new method developed at BNL will permit one-step, or "instant," preparation of an injectable solution. The new method is based upon the use of a stable mixture of ingredients which requires only the last minute addition of technetium-99m for immediate use. This means that many small hospitals will now be able to realize the potential of technetium-99m as a means for doctors to externally visualize the many body organs for which it is so ideally suited.

The report on the "instant" and other technetium-99m compounds was co-authored by Dr. William C. Eckelman and Powell Richards of the Department of Applied Science. Their work is supported by the AEC's Division of Isotopes Development, and Dr. Atkins' work with fluorine-18 as well as technetium is supported by the Division of Biology and Medicine.



Left lateral view



Anterior (front) view

Brain scintiphoto performed with technetium-99m-DTPA (chelating agent) on a young woman. Abnormal region (arrows) shows concentration of radioactivity. Patient was on an oral contraceptive medication and was thought to have had a cerebral thrombosis (blood clot).

Soccer

Ken Batchelor		
BNL 4	vs.	Dowling College 2
BNL 2	vs.	Patchogue H.S. 0
BNL 2	vs.	Hofstra Univ. 0

The BNL soccer team continued its winning ways with three victories in 11 days, all against very competitive teams. On Tuesday, September 14th, BNL entertained Dowling College in a game at Brookhaven. Dowling started the game at a fast pace and it appeared for a time that they would overrun the older BNL team; but after 15 minutes, BNL began to take control of the game and after two near misses went ahead with a fine opportunist goal by Strayer. Minutes later, BNL went further ahead when Meyers dribbled the ball through and scored with a hard left foot shot from long range. BNL continued to keep up the pressure and was rewarded by a third goal by McCafferty. In the second half, BNL relaxed the pressure and allowed Dowling to score two goals through Fawizzi and Hobbin. However, towards the end, BNL regained control and was rewarded when Farrel beat two players and placed the ball in the net from close range.

On Tuesday, September 21st, BNL was again in action against a very fit and fast young team from Patchogue High School. In this game, the boys showed good defense and some fine approach work but were never able to get the ball near enough to the BNL goal to create good scoring chances. As a result, BNL was victorious by a score of 2 goals to nil through goals by Meyers and Ting Pun.

On Saturday, September 25th, BNL visited Hofstra University and was again victorious by 2 goals to nothing. The game was played at a fast pace throughout with Hofstra very quick to tackle and not giving the BNL attack time to control the ball before shooting. In the first quarter, play was very even in midfield with both defenses covering well until late in the quarter, a fine move down the right wing saw Bald place a high cross over the goal-keeper's head into the far corner of the net. Hofstra was stung by this reverse and after beating the BNL defense for one of the few times in the game were frustrated by a good diving save by Chen in the BNL goal. In the second quarter, play was again even and BNL was awarded a penalty which they missed, the shot going straight at the goalkeeper. However, in the third quarter, a good passing move down the left gave Bald the opportunity to score again, this time with a fine curving left foot shot. At this point in the game, the BNL half back line took control of the game with McClaren playing an outstanding game at wing half. In the last period, BNL came close to scoring several times, the ball hitting the post or bar three times. Thus, an excellent game ended with a victory for experience over youth.

Mountain Club News

There will be a meeting of the BNL Mountain Club on Thursday, October 14 at 7:30 p.m. in the Recreation Hall. On the agenda are discussions of officers, budget, including purchase of new equipment, fall trips, and other topics.

Post Office Announcement

Effectively immediately the minimum size for post cards to all foreign countries, except Canada and Mexico, is 3½ by 5½ inches. The maximum size limit is 4¼ by 6 inches.

Stony Brook Events

A recital by a German pianist on his first visit to the United States, an art sale of original prints and lithographs, and a showing of Luis Bunuel's surrealistic film "Los Olvidados" are among events open to the public this week at the State University of New York at Stony Brook. Unless indicated, the events listed are open to the public without charge.

Monday, October 11

Associate Professor of History Herman Lebovics continues his series of lectures, "From Liberalism to Communism: Origins of Contemporary European Ideologies, 1648-1848" at 5 p.m. in Room 109 of the Lecture Center.

Acrylics and drawings by Walter Winika are exhibited in the Stony Brook Union Gallery, 10 a.m. to 5 p.m., through October 22.

Tuesday, October 12

Director Luis Bunuel's surrealistic film on youth and poverty in Mexico, "Los Olvidados," will be screened as this week's presentation in the International Film and Lecture Series at 7:30 p.m. in the Lounge of the International Residential College (Stage XII B Dormitory).

Wednesday, October 13

A Physics Department Colloquium series continues with a consideration of "New Polarization Observations and Interpretation of Minkowski Bands in the Magnetic White Dwarf," by Dr. R. Angel of Columbia University, at 4:30 p.m. in Room 137 of the Physics Building.

Thursday, October 14

A recital by Dieter Werning, a German pianist on his first tour of the United States, will feature music by Schubert, Schumann and Chopin at 8 p.m. in the Stony Brook Union Auditorium.

A sale of original prints and lithographs from the Bermond Gallery, Ltd. will be held from 11 a.m. to 10 p.m. in the Stony Brook Union Gallery. It will be repeated on Friday, October 15, same time and place.

Rocha's "Antonio Das Mortes" and Berman's "Hour of the Wolf" are this week's presentations in the series, "The Cinema - A World Overview," to be shown beginning at 8:30 p.m. in Room 100 of the Lecture Center.

Distinguished Professor of English Alfred Kazin continues his lectures on "Literature of the 20th Century," which focuses on works by Freud, Marx and Engels, Dostoevsky, Joyce, Mann, Nietzsche and Sir James Frazer, at 5 p.m. in Room 102 of the Lecture Center.

"Happiness is . . . ?" a panel discussion of the future influence of science and technology on the quality of life, is this week's topic in a series of lectures, discussions and debates entitled "Anti-science." The discussion with a panel composed of Dr. John Garcia, Professor of Psychology; Thomas J. J. Altizer, Professor of English; and David McWhirter, M.D., Assistant of the University Health Services; will be in Room 110 of the Lecture Center at 8 p.m.

Saturday, October 16

The "Kiddie Flicks" fall program continues with a full length children's film, to be shown at 1:30 p.m. in the Stony Brook Union Auditorium. Admission \$.50.

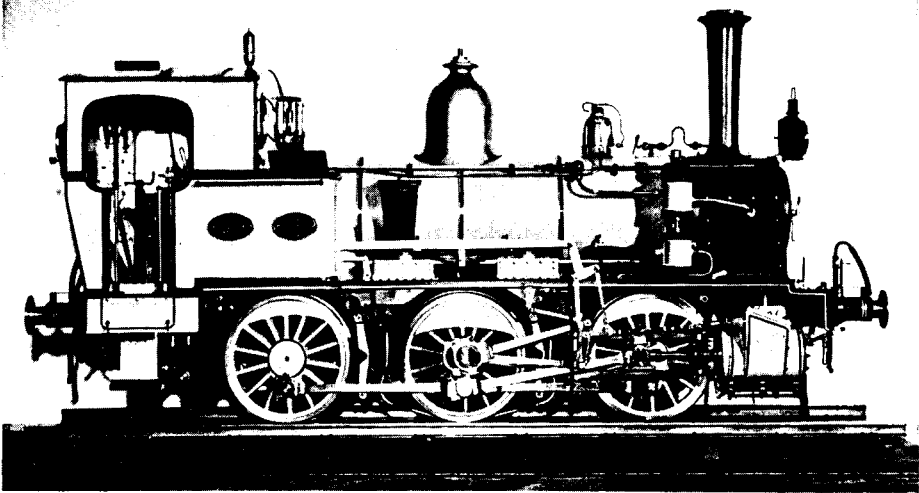
Aviation Club

The BERA sponsored Aviation Club, inactive since 1969, is presently seeking new and former members for the purpose of re-activation of the Club and a discussion of future activities.

The Aviation Club, founded in 1967, is open to all Laboratory employees and their spouses. Perspective members should have an interest in aviation but need not be pilots. However, with sufficient pilot or student pilot membership, benefits include substantial reduction in flying costs, plane rentals and instruction.

Parties interested in attending an informal organizational meeting should contact Alan Underbrink (Biology, Ext. 7203), Bob Ayres (Chemistry, Ext. 7266) or Arnold Roesch (Physics, Ext. 7667).

Locomotive On Display



This live-steam model of a suburban tank engine is 33 in. long and took Tom Oversluizen of the Physics Department 10 years to build. The model is built to 1/10 scale, 143.5 mm gage, holds 2 quarts of water, and operates with a steam pressure of 100 psi. It is coal fired and can haul a load of approximately 500 lbs. on level track. This type of locomotive was originally built between 1904 and 1914 by various firms in Germany and Holland, and was used primarily for short-haul passenger service in the western part of Holland. Tom Oversluizen's model is currently on display in the Research Library, where it will remain for the next 2 weeks.

Cafeteria Menu

Week Ending October 14, 1971

Friday, October 8	
Manhattan Clam Chowder	
Fried Fillets of Sole w/Tartar Sauce & French Fries	.95
Codfish Cakes & Spaghetti	.80
Baked Beef Loaf w/Savory Gravy & 1 Veg.	.85
Monday, October 11	
Cream of Tomato Soup	
Breaded Pork Chop w/Applesauce & 1 Veg.	.95
Beef Ravioli w/Parmesan Cheese & 1 Veg.	.90
Beef Livers w/Smothered Onions & 1 Veg.	.85
Tuesday, October 12	
French Onion Soup	
Salisbury Steak w/Brown Gravy & 1 Veg.	.85
Frankfurters Rolled in Bacon w/Baked Beans & Cole Slaw	.85
Sliced Turkey & Stuffing w/Cranberry Sauce, Giblet Gravy & 1 Veg.	.90
Wednesday, October 13	
Vegetable Soup	
Chinese Pepper Steak on Rice	.90
Old Fashioned Chicken Pie w/Biscuit Crust	.95
Flounder Stuffed w/Crabmeat, Tartar Sauce & 1 Veg.	.90
Thursday, October 14	
Turkey Noodle Soup	
Grilled Monte Cristo Sandwich & Pickled Beets	.85
Veal Pattie w/Noodles Oregano	.85
Braised Beef a la Mode & 1 Veg.	.95

Arrivals & Departures

Arrivals	
John R. Barker.....	Chemistry
David B. Blackmur.....	Mech. Engrg.
Robert A. Brown.....	Medical
Victor N. Crump.....	P.E.P.
William F. Eberspacher.....	P.E.P.
Donald W. Joynes.....	P.E.P.
Yong Y. Lee.....	Accelerator
Theodore J. Przystas.....	Chemistry
Edith P. Smith.....	Medical

Departures	
Donald V. Hirst.....	Physics
Vincent P. Piazzola.....	P.E.P.
Benedetto Randazzo.....	P.E.P.
Raymond H. Rheau.....	Accelerator
Robert L. Uphoff.....	P.E.P.
Thomas J. Farra.....	Accelerator
Vincent S. LoGrasso, a Development Engineer in the Accelerator Department since March 11, 1968, died on October 1, 1971.	

Football Notes

by Jack Brennan

The Gazelles assured themselves at least a first place tie by beating the High Balls 20-0. The Gazelles defense, taking their third shutout, were led by J. Hooper (4) and A. Fogarty (2) interceptions. Hooper had a TD on one interception and set up another close to the goal line with another.

B. Jansson of the Slow Pokes had a "super star night" as he scored 5 T.D.'s; 3 on passes and 2 on interceptions, as the Slow Pokes beat the Red Dogs 37-19.

The Phoubars beat the Super Sutures 28-6 as P. Hlavac threw 4 T.D.'s. The Phoubars meet the Red Dogs tonight for the remaining playoff spot.

	Won	Lost
Gazelles	4	0
Slow Pokes	3	1
High Balls	2	1
Phoubars	1	2
Red Dogs	1	3
Super Sutures	0	4

Bowling News

Grace Fales

Red League

Highs for the night were R. Larsen 202/213/604 series for the Neutrons, H. Frei 208 for the Old Timers, V. LoDestro 202 and K. Asselta 213 for the Lucky Strikes, D. Stelmaschuk 231 for the Bio Rads, and for the Alphas P. Klotz 206.

Green League

From the start of the season, high scratch game J. Scesny 279. High scratch series J. Scesny 646, followed by R. Meier 610. 200's for the night were R. Meier 231, G. Meinken 204, J. Scesny 203 and 205, N. Parrinello 229, G. Guydish 201, W. Kollmer 213, C. Zavesky 200 and G. Fales 202.

Pink League

Lanes 25 and 26 at Port Jeff Bowl sizzled under the power of the Pinsplitters who were still nudged out of first place by one point by the Alley Oops. Marge Stoeckel led the pack with 189/522 and was assisted by Grace Fales, 190, and Lillian Hillerud, 178, who had their eyes on the pocket also. Beverly Nine, 168, and Marie Brenner, 170, did well for the night. Who is laying claim to the cellar?

